D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

CURRENT DATE

Robert Francis
Lauscha Fiber International
105 East Port Lane
Summerville, South Carolina 29483

Re: Construction Permit No. 0900-0050-CG

Dear Mr. James:

Enclosed is Construction Permit No. 0900-0050-CG. This construction permit is being issued in accordance with the plans, specifications and other information submitted in the construction permit application, as amended.

In addition to this permit to construct, a permit to operate is required in accordance with *South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards*. The regulations require a written request for a new or revised operating permit to cover any new or altered source, postmarked no later than fifteen (15) days after the actual date of initial startup of each new or altered source unless a more stringent time frame is required.

Please note the emissions limitations and operational requirements contained within this permit. It is important for you and/or an authorized representative responsible for the overall operation of this facility to read this issued permit carefully and to understand all requirements. If any errors or omissions are discovered, please notify Tawanna F. Reid of my staff, via e-mail at reidtf@dhec.sc.gov, or call (803) 898-8718 immediately.

Pursuant to the South Carolina Administrative Procedures Act, any Department decision involving the issuance, denial, renewal, suspension or revocation of a permit may be appealed by the applicant, permittee, licensee, and/or affected persons. Please see the enclosed "Guide to Board Review" for guidelines on filing an appeal.

Sincerely,

Elizabeth J. Basil
Director, Engineering Services Division, Bureau of Air Quality

EJB:tfr:typist's initials lower case

Enclosure

cc: Permit File: 0900-0050-CG

ec: Wendy Boswell, BEHS
Nick Giannopoulos, ngiannopoulow@northwindgrp.com
Robert James, rjames@unifrax.com
Hans-Peter Merklein, HPMerklein@unifrax.com

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

Office of Environmental Quality Control
Bureau of Air Quality
Synthetic Minor Construction Permit

Lauscha Fiber International
105 East Port Lane
Summerville, South Carolina 29483
Dorchester County

Pursuant to the provisions of the *Pollution Control Act*, Sections 48-1-50(5) and 48-1-110(a), the 1976 *Code of Laws of South Carolina*, as amended, and *South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards*, the Bureau of Air Quality authorizes the construction of this facility and the equipment specified herein in accordance with the plans, specifications, and other information submitted in the construction permit application received on September 29, 2014, as amended. All official correspondence, plans, permit applications, and written statements are an integral part of the permit. Any false information or misrepresentation in the application for a construction permit may be grounds for permit revocation.

The construction and subsequent operation of this facility is subject to and conditioned upon the terms, limitations, standards, and schedules contained herein or as specified by this permit and its accompanying attachments.

Permit Number: **0900-0050-CG**
Issue Date: **ISSUED DATE**

_____

Director, Engineering Services Division
Bureau of Air Quality

A. PROJECT DESCRIPTION

Permission is hereby granted to install six (6) additional Wool Fiberglass Flame Attenuation Lines (17-22), and remove the in-line filters on existing Lines 13-16. Each of the proposed lines will be equipped with a natural gas-fired burner, similar to the existing lines, having a heat input capacity of 5.2 MMBtu/hr each. The facility is proposing to install two (2) Rotary Spinner Lines that will produce a micro glass fiber similar to the flame attenuation lines, but will differ in equipment design.

The facility will also establish synthetic minor limits to avoid Title V and PSD.

B. EQUIPMENT

Equipment ID	Equipment Description	Control Device ID	Emission Point ID
17-18	Flame Attenuation Line #17-18 with 5.2 million BTU/hr natural gas fired burner	CD-OSP-5A CD-CC-5A CD-BAG-1	OSP-5 BAG-1
19-20	Flame Attenuation Line #19-20 with 5.2 million BTU/hr natural gas fired burner	CD-OSP-5B CD-CC-5B CD-BAG-1	OSP-5 BAG-1
21-22	Flame Attenuation Line #21-22 with 5.2 million BTU/hr natural gas fired burner	CD-OSP-5C CD-CC-5C CD-BAG-1	OSP-5 BAG-1
23-24	Rotary Spinner Line #1-2	CD-OSP-5C CD-CC-5C CD-BAG-1	OSP-5 BAG-1

C. CONTROL DEVICES

Control Device ID	Control Device Description	Pollutant(s) Controlled
CD-OSP (5A, 5B, 5C)	Rotary Drum Filters	[2]$PM/PM_{10}/PM_{2.5}$
CD-CC (5A, 5B, 5C)	Cleaning Cyclones	$PM/PM_{10}/PM_{2.5}$
[1]CD-BAG-1	Baghouse	$PM/PM_{10}/PM_{2.5}$

[1]existing; only used when the differential pressure across the drum filters is elevated

[2]PM (Particulate Matter); PM_{10} (PM with an aerodynamic diameter less than or equal to a nominal 10 micrometers); $PM_{2.5}$ (PM with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers)

D. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions
D.1	**Equipment/Control Device ID:** All (S.C. Regulation 61-62.1, Section II.J.1.g) A copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. The owner or operator shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least 5 years from the date the record was generated and shall be made available to a Department representative upon request.
D.2	**Equipment/Control Device ID:** CD-OSP (5A, 5B, 5C), CD-CC (5A, 5B, 5C), CD-BAG-1 The owner/operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection by Department personnel.
D.3	**Equipment/Control Device ID:** CD-OSP (5A, 5B, 5C), CD-CC (5A, 5B, 5C), CD-BAG-1 All gauges shall be readily accessible and easily read by operating personnel and Department personnel (i.e. on ground level or easily accessible roof level). Monitoring parameter readings (i.e., pressure drop readings, etc.) and inspection checks shall be maintained in logs (written or electronic), along with any corrective action taken when deviations occur. Each incidence of operation outside the operational ranges, including date and time, cause, and corrective action taken, shall be recorded and kept on site. Exceedance of operational range shall not be considered a violation of an emission limit of this permit, unless the exceedance is also accompanied by other information demonstrating that a violation of an emission limit has taken place. Reports of these incidences shall be submitted annually. If no incidences occurred during the reporting period then a letter shall indicate such. Any alternative method for monitoring control device performance must be preapproved by the Department and shall be incorporated into the permit as set forth in S.C. Regulation 61-62.1 Section II.
D.4	**Equipment/Control Device ID:** CD-OSP (5A, 5B, 5C), CD-CC (5A, 5B, 5C) Operational ranges for the monitored parameters shall be established to ensure proper operation of the pollution control equipment. These operational ranges for the monitored parameters shall be derived from stack test data, vendor certification, and/or operational history and visual inspections, which demonstrate the proper operation of the equipment. These ranges and supporting documentation (certification from manufacturer, stack test results, 30 days of normal readings, opacity readings, etc.) shall be submitted to the Director of Engineering Services within 180 days of startup. Operating ranges may be updated following submittal to the Department.

D. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions
D.5	**Equipment/Control Device ID:** All (S.C. Regulation 61-62.1, Section II.E; S.C. Regulation 61-62.1, Section II.G) This facility is a potential major source for PM, PM_{10}, and $PM_{2.5}$. The facility has agreed to federally enforceable operating limitations to limit its potential to emit to less than 250 tons per year for PM emissions, and less than 100 tons per year for PM_{10} and $PM_{2.5}$ emissions, to avoid PSD and Title V. The owner/operator shall maintain any records necessary to determine facility wide $PM/PM_{10}/PM_{2.5}$ emissions. $PM/PM_{10}/PM_{2.5}$ emissions shall be calculated on a monthly basis, and a twelve month rolling sum shall be calculated for total $PM/PM_{10}/PM_{2.5}$ emissions. Emissions from malfunctions are required to be quantified and included in the calculations. The twelve month rolling sum shall be less than 250 tons for PM and less than 100 tons for PM_{10} and $PM_{2.5}$ emissions. Reports of the calculated values and the twelve-month rolling sum, calculated for each month in the reporting period, shall be submitted annually. An algorithm, including example calculations and emission factors, explaining the method used to determine emission rates shall only be included in the initial report. Subsequent submittals of the algorithm are required within 30 days of the change if the algorithm or basis for emissions is modified or the Department requests additional information.
D.6	**Equipment/Control Device ID:** All (S.C. Regulation 61-62.5, Standard No. 4, Section IX) Where construction or modification began after December 31, 1985, emissions from these source(s) (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.
D.7	**Equipment/Control Device ID:** All (S.C. Regulation 61-62.5, Standard No. 4, Section VIII) Particulate matter emissions shall be limited to the rate specified by use of the following equations: For process weight rates less than or equal to 30 tons per hour $E = (F)\ 4.10P^{0.67}$ and For process weight rates greater than 30 tons per hour $E = (F)\ 55.0P^{0.11} - 40$ Where E = the allowable emission rate in pounds per hour P = process weight rate in tons per hour F = effect factor from Table B in S.C. Regulation 61-62.5, Standard No. 4

D. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions
D.8	**Equipment/Control Device ID:** CD-OSP (5A, 5B, 5C), CD-CC (5A, 5B, 5C), CD-BAG-1 Each cyclone shall be in place and operational whenever processes controlled by the cyclone are running, except during periods of cyclone malfunction or mechanical failure. The following operation and maintenance checks will be made on at least a weekly basis for all cyclones: • Check each cyclone and ductwork system for damaged or worn sheet metal or other interferences with proper operation. • Check dust collection hoppers and conveying systems for proper operation. The owner/operator shall install, operate, and maintain pressure drop gauge(s) on each module of the drum filters. The owner/operator shall continue to operate and maintain pressure drop gauge(s) on each module of the baghouse; when the baghouse is operating. Pressure drop readings shall be recorded daily during source operation. Operation and maintenance checks shall be made on at least a weekly basis for baghouse cleaning systems, dust collection hoppers, and conveying systems for proper operation. The baghouse shall be in place and operational whenever processes controlled by it are running, except during periods of baghouse malfunction or mechanical failure. Records of pressure drop readings for the drum filters and baghouse, along with the results from the operation and maintenance checks (all control devices) shall be maintained in logs (written or electronic), along with any incidences of corrective action taken. Reports of these incidences shall be submitted annually. If no incidences occurred during the reporting period then a letter shall indicate such. Records of pressure drop readings, along with operation and maintenance checks shall be maintained in logs and kept on site.
D.9	**Equipment/Control Device ID:** All These source(s) are permitted to burn only natural gas as fuel. The use of any other substances as fuel is prohibited without prior written approval from the Department.

E. RESERVED

F. MODELING REQUIREMENTS

Condition Number	Condition
F.1	Air dispersion modeling (or other method) has demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard. Any changes in the parameters used in the air dispersion modeling may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment - Modeled Emission Rates of this permit. Higher emission rates may be administratively incorporated into Attachment - Modeled Emission Rates of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal ambient air quality standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded. The owner/operator shall maintain this facility at or below the emission rates as listed in Attachment - Modeled Emission Rates, not to exceed the pollutant limitations of this construction permit. Should the facility wish to increase the emission rates listed in Attachment - Modeled Emission Rates, not to exceed the pollutant limitations in the body of this permit, it may do so by the administrative process specified above. This is a State Only enforceable requirement.

G.-H. RESERVED

I. PERIODIC REPORTING SCHEDULE

Compliance Monitoring Report Submittal Frequency	Reporting Period (Begins on the startup date of the source.)	Report Due Date
Quarterly	January-March April-June July-September October-December	April 30 July 30 October 30 January 30
Semiannual	January-June April-September July-December October-March	July 30 October 30 January 30 April 30
Annual	January-December April-March July-June October-September	January 30 April 30 July 30 October 30
Note: This reporting schedule does not supersede any federal reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, and 40 CFR Part 63. All federal reports must meet the reporting time frames specified in the federal standard unless the Department or EPA approves a change.		

J. REPORTING CONDITIONS

Condition Number	Condition
J.1	Reporting required in this permit, shall be submitted in a timely manner as directed in the Periodic Reporting Schedule of this permit.

J. REPORTING CONDITIONS

Condition Number	Condition
J.2	All reports and notifications required under this permit shall be submitted to the person indicated in the specific condition at the following address: **2600 Bull Street** **Columbia, SC 29201** The contact information for the local EQC Regional office can be found at: **http://www.scdhec.gov**
J.3	The owner/operator shall submit written notification to the Director of Engineering Services of the date construction is commenced, postmarked no later than 30 days after such date.
J.4	Unless elsewhere specified within this permit, all reports required under this permit shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality.
J.5	(S.C. Regulation 61-62.1, Section II.J) For sources not required to have continuous emissions monitors, any malfunction of air pollution control equipment or system, process upset or other equipment failure which results in discharges of air contaminants lasting for one hour or more and which are greater than those discharges described for normal operation in the permit application shall be reported to the Department's local Environmental Quality Control Regional office within 24 hours after the beginning of the occurrence. The owner/operator shall also submit a written report within 30 days of the occurrence. This report shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality and shall include, at a minimum, the following: 1. The identity of the stack and/or emission point where the excess emissions occurred; 2. The magnitude of excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the excess emissions; 3. The time and duration of excess emissions; 4. The identity of the equipment causing the excess emissions; 5. The nature and cause of such excess emissions; 6. The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction; 7. The steps taken to limit the excess emissions; and, 8. Documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated, to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions.

K. PERMIT EXPIRATION AND EXTENSION

Condition Number	Condition
K.1	(S.C. Regulation 61-62.1, Section II.A.4) Approval to construct shall become invalid if construction: a. is not commenced within 18 months after receipt of such approval; b. is discontinued for a period of 18 months or more; or c. is not completed within a reasonable time as deemed by the Department. The Department may extend the construction permit for an additional 18-month period upon a satisfactory showing that an extension is justified. This request must be made prior to the permit expiration.
K.2.	This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.

L. PERMIT TO OPERATE

Condition Number	Condition
L.1	(S.C. Regulation 61-62.1 Section II.F.2) The owner/operator or professional engineer in charge of the project shall certify that, to the best of his/her knowledge and belief and as a result of periodic observation during construction, the construction under application has been completed in accordance with the specifications agreed upon in the construction permit issued by the Department.
L.2	If construction is certified as provided in S.C. Regulation 61-62.1 Section II.F.2, the owner or operator, may operate the source in compliance with the terms and conditions of the construction permit until the operating permit is issued by the Department.
L.3	If construction is not built as specified in the permit application and associated construction permit(s), the owner/operator must submit to the Department a complete description of modifications that are at variance with the documentation of the construction permitting determination prior to commencing operation. Construction variances that would trigger additional requirements that have not been addressed prior to start of operation shall be considered construction without a permit.
L.4	(S.C. Regulation 61-62.1, Section II.F.3) The owner or operator shall submit a written request to the Director of the Engineering Services for a new or revised operating permit to cover any new or altered source postmarked no later than 15 days after the actual date of initial startup of each new or altered source. The written request for a new or revised operating permit must include, as a minimum, the following information: i. A list of sources that were placed into operation. ii. The actual date of initial startup of each new or altered source.

M. RESERVED

N. GENERAL CONDITIONS

Condition Number	Condition
N.1	The permittee shall pay permit fees to the Department in accordance with the requirements of S.C. Regulation 61-30, Environmental Protection Fees.
N.2	In the event of an emergency, as defined in S.C. Regulation 61-62.1, Section II.L, the owner or operator shall demonstrate the affirmative defense of an emergency through properly signed, contemporaneous operating logs, and other relevant evidence that verify: 1. An emergency occurred, and the owner or operator can identify the cause(s) of the emergency; 2. The permitted source was at the time the emergency occurred being properly operated; 3. During the period of the emergency, the owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and 4. The owner or operator gave a verbal notification of the emergency to the Department within 24 hours of the time when emission limitations were exceeded, followed by a written report within 30 days. The written report shall include, at a minimum, the information required by S.C. Regulation 61-62.1, Section II.J.1.c.i through viii. The written report shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. In any enforcement action, the owner or operator seeking to establish the occurrence of an emergency has the burden of proof. This provision is in addition to any emergency, or upset provision contained in any applicable requirement.

N. GENERAL CONDITIONS

Condition Number	Condition
N.3	(S.C. Regulation 61-62.1, Section II.O) Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow the Department or an authorized representative to perform the following: 1. Enter the facility where emissions-related activity is conducted, or where records must be kept under the conditions of the permit. 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. 3. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit. 4. As authorized by the Federal Clean Air Act and/or the S.C. Pollution Control Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

ATTACHMENT - MODELED EMISSION RATES

Lauscha Fiber International
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The emission rates listed herein are not considered enforceable limitations but are used to evaluate ambient air quality impact. Until the Department makes a determination that a facility is causing or contributing to an exceedance of a state or federal ambient air quality standard, increases to these emission rates are not in themselves considered violations of these ambient air quality standards (see Modeling Requirements).

STANDARD NO. 2 and 7 - EXEMPTED AAQS EMISSION RATES (LBS/HR)							
SOURCE/STACK ID	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_x**	**CO**	**Lead**	**HF**
BAG-1	0.06	--	--	--	--	--	--
FAL-1	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-2	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-3	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-4	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-5	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-6	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-7	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-8	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-9	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-10	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-11	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-12	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-13	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-14	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-15	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-16	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-17	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-18	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-19	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-20	0.108	0.038	0.003	0.505	0.424	2.5E-06	--
FAL-21 *	~~0.108~~	~~0.038~~	~~0.003~~	~~0.505~~	~~0.424~~	~~2.5E-06~~	--
FAL-22 *	~~0.108~~	~~0.038~~	~~0.003~~	~~0.505~~	~~0.424~~	~~2.5E-06~~	--
RSL-1 *	0.203	0.038	0.003	0.505	0.424	2.5E-06	--
RSL-2 *	0.203	0.038	0.003	0.505	0.424	2.5E-06	--
VAC-1	0.027	--	--	--	--	--	--
VAC-2	0.005	--	--	--	--	--	--

ATTACHMENT - MODELED EMISSION RATES

Lauscha Fiber International
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STANDARD NO. 2 and 7 - EXEMPTED AAQS EMISSION RATES (LBS/HR)							
SOURCE/STACK ID	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_x**	**CO**	**Lead**	**HF**
FACILITY TOTAL	2.655	0.844	0.067	11.107	9.330	5.6E-05	--

** FAL-21 & FAL-22 cannot operate simultaneously with RSL-1 & RSL-2. Since emissions (PM10) are greater for RSL-1 & RSL-2, emissions for FAL-21 & FAL-22 are shown but are not included in the facility total.*